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5-6-02

MELISSA SCHWARTZ

Clifford Chance Rogers & Wells LLP

Clifford Chance Rogers & Wells LLP

Docket No. 6311-038

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Christophe Thal et al.
Serial No. : 10/090,255
Filing Date : March 4, 2002
For : METHOD FOR DESCRIBING FINANCIAL INSTRUMENTS
Examiner : Not Yet Assigned
Group Art Unit : 2161

Commissioner for Patents
Washington, D.C. 20231

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PRELIMINARY AMENDMENT

Sir:

Prior to examination of the above-referenced application which was filed March 4, 2002, please amend the above-referenced application as follows:

IN THE SPECIFICATION:

Please replace the paragraphs beginning on page 4, line 12 and ending on page 9, line 7 with the following:

For a fuller understanding of the invention, reference is made to the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a block diagram of a system in which bond information is communicated according to the method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to Appendix B, there is shown an Extensible Markup Language (XML) document type definition (DTD) for describing a bond in accordance with an exemplary embodiment of the present invention. XML is an open technology standard designed to facilitate structured data interchange on the World Wide Web. The XML standard includes the use of document type definitions that provide a formal description format for specific documents using XML syntax. More specifically, a DTD typically sets out the names that are to be used for the different types of element, where they may occur within the document and the ways the different elements may combine for a particular document type. XML and the use of document type definitions are discussed in detail at <http://www.w3.org/TR/xmlschema-0/>, the contents of which are incorporated herein by reference.

As described above, a bond's yield may depend on any number of attributes (see Appendix A for a listing and description of these attributes). For example, the DTD 101 of Appendix B may be used for describing bonds by using various bond attributes including attributes that pertain to bond identification, calendar, issue date, settlement date, ex-dividend date, accrual information, price, yield, payment periods, coupons, capitalization, amortization, stepup date, value recovery right, option schedule and rolling guarantee information associated with a particular bond. The bond features that may be used to describe a particular bond using the DTD of Appendix B are listed in section 103. The bond features set forth in section 103 may

be used to describe a variety of different bond types including, by way of non-limiting example, government, emerging market and corporate bonds.

The DTD of Appendix B includes a section to be used for describing any of the various bond features listed in section 103 including an issue date section 107, a settlement date section 109, an ex-dividend section 111, an accrual section 113, a price section 115, a yield section 117, a periods section 119, a coupons section 121, a capitalization section 123, an amortization section 125, a stepup section 127, a recovery right section 129, an option schedule section 131 and a rolling guarantee section 133.

In addition to the bond attributes listed in section 103, the DTD of Appendix B also may include other bond attributes that are necessary for fully defining the bond attributes. For example, the coupon feature of a bond may require that additional attributes be specified for fully defining the bond's coupon feature. These additional attributes may include, by way of non-limiting example, whether the coupons are periodic coupons, detailed coupons or perpetual coupons.

In addition to the bond features included in section 103, in an exemplary embodiment a DTD may be formed including any other attributes that are required to fully describe any other type of bond. Also, any features not impacting any of the analytic calculations may not included in a DTD used to describe the particular bond.

The DTD of Appendix B also includes certain elements that are used to describe a particular bond but that do not relate to the yield performance of the bond. For example, section 105 of the DTD of Appendix B is a bond identification element in which bond attributes such as, by way of non-limiting example, CUSIP number, ISIN number and country class are included to identify the particular bond.

NYB 1337978.1

Accordingly, the XML document of Appendix C may be used to accurately and uniformly define a bond by the attributes that affect the bond's yield. By conforming to the document definition contained in the DTD of Appendix B, an entity may describe the particular bond and accurately communicate the bond description to other entities that adhere to the document definition of the DTD of Appendix B.

Referring now to FIG. 1, there is shown a block diagram of a system 301 in which bond information is communicated according to the method of the present invention. System 301 includes a client access device 303 (for example a personal computer executing a graphical user interface) that receives bond price quote from a pricing engine 305 that is operated by a financial institution and that receives real-time information and calculates a bond price. In the event the client desires to execute a transaction based on the price quote received, pricing engine 305 forwards a bond trade request to a trading engine 307. Trading engine 307 may communicate with a counterparty 309 in order to complete the trade request requested by the client. Once the trade is completed, trading engine 311 communicates the transaction details to a settlement system 311 that in turn causes the transaction information to be posted in the financial institution's books and records 313.

Each device in system 301 includes an XML processor 315 for ensuring that communications between the devices are according to the document definition of the DTD of Appendix B. For example, upon determining a price quote in response to a price request from a client, pricing engine 305 passes the bond price quote details to XML processor 315(5) that then formats the bond information associated with the price quote into an XML document that conforms to the document definition of the DTD of Appendix B. XML processor 315(3) associated with client access device 303 then receives the XML document and presents the bond

information to client access device 303 in any format suitable for presentation to the client. Similarly, communications between pricing engine 305 and trading engine 315 is managed by XML processors 315(5) and 315(7), respectively, so that communications conform to the document definition of DTD 101. XML processors 315(11), 315(9) and 315(13) provide a similar function in managing the communication of bond information on behalf of settlement system 311, counterparty 309 and books and records 313, respectively. Thus, because each device in system 301 communicates with any other device according to the uniform document definition of the DTD of Appendix B, the communicating of bond information between devices is accurate and efficient.

In an exemplary embodiment, each device in system 301 communicates natively in XML according to the document definition of the DTD of Appendix B. For example, upon determining a price quote in response to a price request, pricing engine 305 formats the bond information associated with the price quote into an XML document according to the document definition of the DTD of Appendix B. While system 301 includes certain devices and entities that describe bond attributes and communicate such bond information using an XML syntax according to the document definition of the DTD of Appendix B of the present invention, any other device or entity that desires to describe a bond and communicate such bond information may do so using XML syntax according to the document definition of the DTD of Appendix B.

Please insert the following the following on page 23 after line 25:

```

121 { <!-- if not specified, uses coupon frequency to interpret annualized coupon amount -->
      <!-- ELEMENT amount_adjustment EMPTY>
      <!-- ELEMENT first_coupon (date)>
      <!-- ELEMENT last_regular_coupon (date)>
      <!-- ELEMENT cap (amount)>
      <!-- ELEMENT floor (amount)>
      <!-- ELEMENT detailed_coupons ((date|when_if_months), (amount|margin),
amount_adjustment?, cap?, floor?)+>
      <!-- ELEMENT perpetual_coupons (first_coupon, amount)>
      <!-- index is used when a margin is present in coupons: i.e. "LIBOR", "RPI" -->
      <!-- ELEMENT index (index_id, nb_reset_days?)>
      <!-- ELEMENT index_id (#PCDATA)>
      <!-- ELEMENT nb_reset_days (#PCDATA)>
      <!-- capitalisation: amount in annualized % of face value -->
123 { <!-- ELEMENT capitalisation ((date|when_if_months), amount)+>
      <!-- amortisation: amount in % of sinking fund -->
      <!-- ELEMENT amortisation (periodic_amortisation|detailed_amortisation|bullet_amortisation)>
      <!-- date specifies start date of amortisation, end date is maturity -->
125 { <!-- ELEMENT periodic_amortisation ((date|when_if_months), amount)>
      <!-- ELEMENT detailed_amortisation ((date|when_if_months), amount)+>
      <!-- bullet amortisation: amount defaults to 100% of sinking fund -->
      <!-- ELEMENT bullet_amortisation (amount?)>
      <!-- stepup: coupon variation in annualized % of face value, doesn't include capitalisation -->
127 --- <!-- ELEMENT stepup ((date|when_if_months), amount)+>
129 --- <!-- ELEMENT value_recovery_right (index, (date, amount)+)>
      <!-- ELEMENT option_schedule ((periodic_option_schedule|detailed_option_schedule),
date_context?)>
      <!-- periodic option defaults: frequency->coupon frequency, termination date->maturity
date -->
      <!-- ELEMENT periodic_option_schedule (exercise, frequency?, termination_date?)>
      <!-- ELEMENT termination_date (date)>
      <!-- periodic option defaults: frequency->coupon frequency, termination date->maturity
date -->
      <!-- ELEMENT detailed_option_schedule (exercise+)>
      <!-- exercise: end: american option, no end: european option -->
      <!-- ELEMENT exercise (option_style, start, end?, strike)>
      <!-- option style: either "put" for put option, "call" for call option -->
      <!-- ELEMENT option_style (#PCDATA)>
      <!-- ELEMENT start (date)>
      <!-- ELEMENT end (date)>
      <!-- strike price based on 100 face value -->
      <!-- ELEMENT strike (amount)>
      <!-- rolling guarantee: start defaults to issue date, end defaults to maturity, index specifies
guarantor curve -->
133 { <!-- ELEMENT rolling_guarantee (start?, end?, nb_periods, principal_guaranteed?, index)>
      <!-- ELEMENT principal_guaranteed EMPTY>

```

APPENDIX B

```
<!-- XML Document Type Definition for govt, emerging market and corporate bonds -->
<!-- Fixed Income Analytics, -->
```

```
<!-- Basis Elements -->
```

```
<!ENTITY % basic_types PUBLIC "" "basic_types.dtd">
%basic_types;
```

```
<!-- Bond Elements -->
```

```
<!ELEMENT bond (id+, calendar, issue?, settlement, ex_dividend?, accrual, price?, yield, linear_last_periods?,
coupons, capitalisation?, amortisation?, stepup?, value_recovery_right?, option_schedule?,
rolling_guarantee?)>
{
  105 {
    <!ELEMENT id (id_class, id_value)+>
    {
      <!-- id class: "CUSIP", "ISIN", "COUNTRY-CLASS" . -->
      <!ELEMENT id_class (#PCDATA)>
      <!ELEMENT id_value (#PCDATA)>
    }
    <!-- issue date must be specified if when_if_months defines cashflow dates -->
    107 <!ELEMENT issue (date)>
    09 <!ELEMENT settlement (date_context, lockout_period?)>
    {
      111 {
        <!ELEMENT ex_dividend (periodic_ex_dividend|detailed_ex_dividend)>
        {
          <!ELEMENT periodic_ex_dividend (date_context)>
          <!-- date specifies start date of date context -->
          <!ELEMENT detailed_ex_dividend (date, date_context)+>
        }
        {
          113 {
            <!ELEMENT accrual ((periodic_accrual|detailed_accrual), accrual_from?)>
            {
              <!ELEMENT periodic_accrual (day_count_type, rounding?)>
              <!-- date specifies start date of day count type -->
              <!ELEMENT detailed_accrual (date, day_count_type, rounding?)>
              <!ELEMENT accrual_from (date)>
            }
            <!ELEMENT price (price_rounding?, flat_trading?)>
            {
              115 {
                <!ELEMENT price_rounding (rounding_range, rounding)>
                {
                  <!-- rounding range: "all", "llp" when applied only in linear periods, "nollp" -->
                  <!ELEMENT rounding_range (#PCDATA)>
                }
                <!-- flat trading: "all", "exdiv" -->
                <!ELEMENT flat_trading (#PCDATA)>
              }
            }
            {
              117 {
                <!ELEMENT yield (day_count_type, yield_method, frequency?)>
                {
                  <!ELEMENT yield_method (#PCDATA)>
                  <!-- yield frequency defaults to coupon frequency -->
                }
                {
                  119 {
                    <!ELEMENT linear_last_periods (day_count_type, nb_periods, start_on_ex_dividend_date?)>
                    {
                      <!ELEMENT nb_periods (#PCDATA)>
                      <!ELEMENT start_on_ex_dividend_date EMPTY>
                    }
                    <!-- coupons: amount in annualized % of face value, doesn't include capitalisation, amortisation, stepup -->
                    <!ELEMENT coupons ((periodic_coupons|detailed_coupons|perpetual_coupons), frequency, index?)>
                    {
                      <!ELEMENT periodic_coupons (first_coupon, last_regular_coupon?, maturity, (amount|margin),
date_adjustment?, amount_adjustment?, cap?, floor?)>
                      <!-- amount = redemption: defaults to 100, not compatible with amortisation -->
                      <!ELEMENT maturity (date|when_if_months)>
                      {
                        <!ELEMENT when_if_months (#PCDATA)>
                        <!ELEMENT margin (#PCDATA)>
                        <!-- date adjustment: "none", "eom" when end of month convention, "busday", "busdaymth"
when next business day in month -->
                        {
                          <!-- defaults to "eom" -->
                          <!ELEMENT date_adjustment (#PCDATA)>
                          <!-- amount adjustment: if specified, uses the accrual day count type -->
                        }
                      }
                    }
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}
```


APPENDIX C

```

<?xml version = "1.0"?>
<!DOCTYPE bond SYSTEM "cpx_bond.dtd">

<bond>
  {
    203 {
      <id>
        <id_class>COUNTRY-CLASS</id_class><id_value>brazil-c</id_value>
        <id_class>CUSIP</id_class><id_value>tt3163066</id_value>
        <id_class>ISIN</id_class><id_value>XS0049993479</id_value>
      </id>
    }
    205 {
      <calendar>lon#nyk</calendar>
    }
    {
      207 {
        <settlement>
          <date_context>3bd</date_context>
        </settlement>
      }
      {
        209 {
          <accrual>
            <periodic_accrual>
              <day_count_type>30e/360</day_count_type>
            </periodic_accrual>
          </accrual>
        }
        {
          211 {
            <yield>
              <day_count_type>30e/360</day_count_type>
              <yield_method>ISMA</yield_method>
            </yield>
          }
          {
            213 {
              <coupons>
                <periodic_coupons>
                  <first_coupon>
                    <date><day>15</day><month>10</month><year>1994</year></date>
                    </first_coupon>
                    <maturity>
                      <date><day>15</day><month>4</month><year>2014</year></date>
                    </maturity>
                    <amount>8</amount>
                  </periodic_coupons>
                  <frequency>
                    <integer>6</integer>
                  </frequency>
                </coupons>
                <capitalisation>
                  <date><day>15</day><month>10</month><year>1994</year></date>
                  <amount>4.0</amount>
                  <date><day>15</day><month>4</month><year>1995</year></date>
                  <amount>4.0</amount>
                  <date><day>15</day><month>10</month><year>1995</year></date>
                  <amount>4.0</amount>
                  <date><day>15</day><month>4</month><year>1996</year></date>
                  <amount>4.0</amount>
                  <date><day>15</day><month>10</month><year>1996</year></date>
                  <amount>3.5</amount>
                  <date><day>15</day><month>4</month><year>1997</year></date>
                  <amount>3.5</amount>
                  <date><day>15</day><month>10</month><year>1997</year></date>
                  <amount>3.5</amount>
                }
              }
            }
          }
        }
      }
    }
  }

```

{
 <date><day>15</day><month> 4</month><year>1998</year></date> <amount>3.5</amount>
 <date><day>15</day><month>10</month><year>1998</year></date> <amount>3.0</amount>
 <date><day>15</day><month> 4</month><year>1999</year></date> <amount>3.0</amount>
 <date><day>15</day><month>10</month><year>1999</year></date> <amount>3.0</amount>
 <date><day>15</day><month> 4</month><year>2000</year></date> <amount>3.0</amount>
 </capitalisation>
 <amortisation>
 {
 <periodic_amortisation>
 <date><day>15</day><month>4</month><year>2004</year></date>
 <amount>4.7619047619</amount>
 </periodic_amortisation>
 </amortisation>
 <option_schedule>
 <periodic_option_schedule>
 <exercise>
 <option_style>call</option_style>
 <start>
 <date><day>15</day><month>10</month><year>1994</year></date>
 </start>
 <end>
 <date><day>15</day><month>10</month><year>1994</year></date>
 </end>
 <strike>
 <amount>100.0</amount>
 </strike>
 </exercise>
 <frequency>
 <integer>6</integer>
 </frequency>
 <termination_date>
 <date><day>15</day><month> 10</month><year>2013</year></date>
 </termination_date>
 </periodic_option_schedule>
 </option_schedule>
 }
 </bond>

REMARKS

Prior to consideration of the above referenced application, Applicants request entry of the above amendments. Applicants make these amendments in response to A Notice to File Missing Parts mailed on March 26, 2002 (hereinafter "the Notice"). In the Notice, substitute drawings for FIGS. 1 and 2 were required because the drawings contained excessive text To overcome the

objection, Applicants have deleted FIG. 1 and FIG 2 (as indicated in a Drawing Amendment filed concurrently herewith) and have incorporated the contents of FIG. 1 and FIG. 2 in the specification as Appendix B and Appendix C, respectively. In addition, Applicants have amended those portions of the specification that referred to FIG. 1 and FIG. 2 to now refer to Appendix B and Appendix C, respectively. Applicants submit that these amendments do not constitute new matter and has full support in the specification as filed. The claims added by this Preliminary Amendment are deemed necessary to fully protect Applicant's invention.

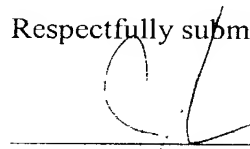
Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

Early and favorable consideration of the above referenced application in light of these preliminary amendments is earnestly solicited.

Date: _____

5/2/02

Respectfully submitted,



Joseph E. Levi
Reg. No. 41,152

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraphs beginning on page 4, line 12 and ending on page 9, line 7 have been replaced with the following:

For a fuller understanding of the invention, reference is made to the following description taken in conjunction with the accompanying drawings, in which:

~~FIG. 1 is an Extensible Markup Language document type definition for describing a bond in accordance with the present invention;~~

~~FIG. 2 is an Extensible Markup Language document for describing a particular corporate bond using the document type definition of FIG. 1; and~~

~~FIG. 3 is a block diagram of a system in which bond information is communicated according to the method of the present invention.~~

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to ~~FIG. 1~~ Appendix B, there is shown an Extensible Markup Language (XML) document type definition (DTD) ~~401~~ for describing a bond in accordance with an exemplary embodiment of the present invention. XML is an open technology standard designed to facilitate structured data interchange on the World Wide Web. The XML standard includes the use of document type definitions that provide a formal description format for specific documents using XML syntax. More specifically, a DTD typically sets out the names that are to be used for the different types of element, where they may occur within the document and the

ways the different elements may combine for a particular document type. XML and the use of document type definitions are discussed in detail at <http://www.w3.org/TR/xmlschema-0/>, the contents of which are incorporated herein by reference.

As described above, a bond's yield may depend on any number of attributes (see Appendix A for a listing and description of these attributes). For example, the DTD 101 of FIG. 1 may be used for describing bonds by using various bond attributes including attributes that pertain to bond identification, calendar, issue date, settlement date, ex-dividend date, accrual information, price, yield, payment periods, coupons, capitalization, amortization, stepup date, value recovery right, option schedule and rolling guarantee information associated with a particular bond. The bond features that may be used to describe a particular bond using the DTD 101 of Appendix B are listed in section 103 of DTD 101. The bond features set forth in section 103 may be used to describe a variety of different bond types including, by way of non-limiting example, government, emerging market and corporate bonds.

The DTD of Appendix B 101 includes a section to be used for describing any of the various bond features listed in section 103 including an issue date section 107, a settlement date section 109, an ex-dividend section 111, an accrual section 113, a price section 115, a yield section 117, a periods section 119, a coupons section 121, a capitalization section 123, an amortization section 125, a stepup section 127, a recovery right section 129, an option schedule section 131 and a rolling guarantee section 133.

In addition to the bond attributes listed in section 103, the DTD of Appendix B 101 also may include other bond attributes that are necessary for fully defining the bond attributes. For example, the coupon feature of a bond may require that additional attributes be specified for fully defining the bond's coupon feature. These additional attributes may include, by way of non-

trade is completed, trading engine 311 communicates the transaction details to a settlement system 311 that in turn causes the transaction information to be posted in the financial institution's books and records 313.

Each device in system 301 includes an XML processor 315 for ensuring that communications between the devices are according to the document definition of the DTD 404 of Appendix B. For example, upon determining a price quote in response to a price request from a client, pricing engine 305 passes the bond price quote details to XML processor 315(5) that then formats the bond information associated with the price quote into an XML document that conforms to the document definition of the DTD 404 of Appendix B. XML processor 315(3) associated with client access device 303 then receives the XML document and presents the bond information to client access device 303 in any format suitable for presentation to the client. Similarly, communications between pricing engine 305 and trading engine 315 is managed by XML processors 315(5) and 315(7), respectively, so that communications conform to the document definition of DTD 101. XML processors 315(11), 315(9) and 315(13) provide a similar function in managing the communication of bond information on behalf of settlement system 311, counterparty 309 and books and records 313, respectively. Thus, because each device in system 301 communicates with any other device according to the uniform document definition of the DTD 404 of Appendix B, the communicating of bond information between devices is accurate and efficient.

In an exemplary embodiment, each device in system 301 communicates natively in XML according to the document definition of the DTD 404 of Appendix B. For example, upon determining a price quote in response to a price request, pricing engine 305 formats the bond information associated with the price quote into an XML document according to the document

definition of the DTD 404 of Appendix B. While system 301 includes certain devices and entities that describe bond attributes and communicate such bond information using an XML syntax according to the document definition of the DTD 404 of Appendix B of the present invention, any other device or entity that desires to describe a bond and communicate such bond information may do so using XML syntax according to the document definition of the DTD 404 of Appendix B.

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5-6-02

Name

Melissa Scantito

Signature

Melissa Scantito

Clifford Chance Rogers & Wells LLP

6311-038

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Christophe Thal et al.

Serial No. : 10/090,255

Group: 2161

Filed : March 4, 2002

Examiner: Not Assigned

For : METHOD FOR DESCRIBING FINANCIAL INSTRUMENTS

May 6, 2002

DRAWING AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

The Examiner is respectfully requested to authorize amendments to FIGS. 1-3 by deleting FIGS. 1 and 2 and changing the label "FIG. 3" to --FIG. 1--.

REMARKS

Applicants make this Amendment to conform the drawings to the specification.

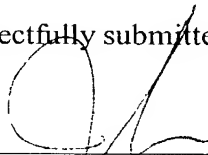
Applicants make these amendments in response to A Notice to File Missing Parts mailed on March 26, 2002 (hereinafter "the Notice"). In the Notice, substitute drawings for FIGS. 1 and 2

were required because the drawings contained excessive text. To overcome the objection, Applicants have deleted FIGS 1 and 2 (as indicated in a Drawing Amendment filed concurrently herewith) and have incorporated the contents of FIG. 1 and FIG. 2 in the specification as Appendix B and Appendix C, respectively. Applicant has also changed the label on the remaining figure from "FIG. 3" to --FIG. 1--.

Applicants respectfully submit that the drawings as amended comply with the requirements of 37 C.F.R. § 1.84, no new matter is added by these amendments to the drawings and support for these amendments can be found in the application as originally filed. The amendments to these figures are shown in red.

Kindly enter the enclosed drawings in this application.

Respectfully submitted,



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